MANAGED COLLABORATIVE CHARGING

BACKGROUND

[0001] Technical Field

[0002] The present invention relates generally to charging electronic devices and, in particular, to managed collaborative charging.

[0003] Description of the Related Art

[0004] Battery packs are used to power many devices from laptops to mobile phones and so on. The problem many people face with using battery power is that sometimes the batteries go dead leaving the device powered by the batteries as unusable. In the modern age, batteries are important as they allow business people to communicate and work on the move using battery-powered mobile devices.

[0005] In the future, there will be many methods to charge devices wirelessly. Further to that end, devices with an in-built or external dual transmitter/receiver could receive and send charge wirelessly. Indeed the in-built or external dual transmitter/receiver could directionally send the charge. The problem with the preceding wireless charging scenario is that there is limited power that can be transmitted wirelessly. For example, a phone may consume 7.5 watts while being used and being charged at the same time, while the above wireless charging devices might only transmit a fraction of a watt which can be very problematic. As another example, in a face-to-face meeting with several participants, a person demonstrating an application might need several watts but current consumption outstrips supply. Thus, there is a need for a way to efficiently manage power drain in mobile devices.

SUMMARY

[0006] According to an aspect of the present principles, a method is provided for managing wireless collaborative charging between at least two mobile devices that include a first mobile device and a second mobile device. The method includes monitoring power usage for at least one of the at least two mobile devices. The method further includes predicting power requirements for at least one of the at least two mobile devices. The method also includes authorizing wirelessly sending power from the first mobile device to the second mobile device based on at least one of the power usage and the power requirements.

[0007] According to another aspect of the present principles, a system is provided for managing wireless collaborative charging between at least two mobile devices that include a first mobile device and a second mobile device. The system includes a power usage monitor for monitoring power usage for at least one of the at least two mobile devices. The system further includes a power requirements predictor for predicting power requirements for at least one of the at least two mobile devices. The system also includes a collaborative charging manager and mode selector for authorizing wirelessly sending power from the first mobile device to the second mobile device based on at least one of the power usage and the power requirements.

[0008] These and other features and advantages will become apparent from the following detailed description of illustrative embodiments thereof, which is to be read in connection with the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0009] The disclosure will provide details in the following description of preferred embodiments with reference to the following figures wherein:

[0010] FIG. **1** shows an exemplary processing system **100** to which the present principles may be applied, in accordance with an embodiment of the present principles;

[0011] FIG. **2** shows an exemplary system **200** for managed collaborative charging, in accordance with an embodiment of the present principles;

[0012] FIG. **3** further shows a mobile device **290**, in accordance with an embodiment of the present principles.

[0013] FIG. **4** shows an exemplary environment **400** to which the present principles can be applied, in accordance with an embodiment of the present principles.

[0014] FIG. **5** shows an exemplary method **500** for managed collaborative charging, in accordance with an embodiment of the present principles;

[0015] FIG. **6** shows an exemplary cloud computing node **610**, in accordance with an embodiment of the present principles;

[0016] FIG. **7** shows an exemplary cloud computing environment **750**, in accordance with an embodiment of the present principles; and

[0017] FIG. **8** shows exemplary abstraction model layers, in accordance with an embodiment of the present principles.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0018] The present principles are directed to managed collaborative charging.

[0019] In an embodiment, the present principles provide a method and system for collaboratively charging a device by understanding the relatedness of the devices. For example, bursting and/or otherwise providing a charge to a target device at a given location can be accomplished by orchestrating routing of the available charge via other devices. Such routing can be done either in series and/or parallel to the target device.

[0020] FIG. **1** shows an exemplary processing system **100** to which the present principles may be applied, in accordance with an embodiment of the present principles. The processing system **100** includes at least one processor (CPU) **104** operatively coupled to other components via a system bus **102**. A cache **106**, a Read Only Memory (ROM) **108**, a Random Access Memory (RAM) **110**, an input/output (I/O) adapter **120**, a sound adapter **130**, a network adapter **140**, a user interface adapter **150**, and a display adapter **160**, are operatively coupled to the system bus **102**.

[0021] A first storage device **122** and a second storage device **124** are operatively coupled to system bus **102** by the I/O adapter **120**. The storage devices **122** and **124** can be any of a disk storage device (e.g., a magnetic or optical disk storage device), a solid state magnetic device, and so forth. The storage devices **122** and **124** can be the same type of storage device or different types of storage devices.

[0022] A speaker **132** is operatively coupled to system bus **102** by the sound adapter **130**. A transceiver **142** is operatively coupled to system bus **102** by network adapter **140**. A display device **162** is operatively coupled to system bus **102** by display adapter **160**.

[0023] A first user input device **152**, a second user input device **154**, and a third user input device **156** are operatively